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### Abstract

In a known method for producing an  $\text{SiO}_2$  blank,  $\text{SiO}_2$  particles are formed in a burner flame assigned to a deposition burner and are deposited under the effect of an electrical field on a deposition surface of a carrier rotating about its longitudinal axis, said at least one deposition burner being reciprocated in a predetermined sequence of movement along the developing blank between turn-around points. Starting from said method, in order to obtain blanks of a predetermined, in particular axially homogeneous, density and mass distribution, it is suggested according to the invention that the geometrical shape of the burner flame should be varied by the electrical field in dependence upon the position of the deposition burner during the sequence of movement. An apparatus which is suited for carrying out the method comprises a carrier which is rotatable about its longitudinal axis, a deposition burner for producing  $\text{SiO}_2$  particles in a burner flame, a drive device by means of which the deposition burner can be reciprocated along the carrier, and a pair of electrodes which is connected to a source of voltage for producing an electrical field which is operative in the area of the burner flame and which, when viewed along the path of movement of the deposition burner, is locally inhomogeneous or variable in time in dependence upon the position of the deposition burner during the sequence of movement of the deposition burner.